

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of operating a superconducting cable comprising:

using a conductor cooled by a refrigerant to transmit electric power;

characterized in that said changing the refrigerant's temperature is ~~changed in~~ accordance with a transmission capacity of a plurality of superconducting cables, each of the plurality of superconducting cable having a circuit;

providing each circuit with a refrigerator that cools the refrigerant for said circuit, and using the refrigerator of a failed circuit to provide refrigerant to a good circuit.

2. (Previously Amended) The method of operating a superconducting cable according to claim 1, characterized in that when a power demand from a load connected with the superconducting cable increases, the refrigerant temperature is reduced to increase the transmission capacity of the superconducting cable to transmit electric power matching the power demand.

3. (Previously Amended) The method of operating a superconducting cable according to claim 1, characterized in that when a power demand from a load connected with the superconducting cable decreases, the refrigerant temperature is increased to decrease the transmission capacity of the superconducting cable to transmit electric power matching the power demand.

4. (Currently Amended) The method of operating a superconducting cable according to claim 1, characterized in that ~~there are a plurality of superconducting cable circuits, and~~

when one of the circuits fails, the refrigerant temperature of ~~an unfailed,~~ the good circuit is reduced below the temperature prior to the failure to increase the transmission capacity of the good circuit.

5. (Currently Amended) The method of operating a superconducting cable according to claim 4, characterized in that ~~each circuit includes a refrigerator that cools the refrigerant for that circuit, and~~

~~both the refrigerator of the failed circuit and the refrigerator of the good circuit are used to cool the refrigerant of the good circuit~~ is cooled to a lower temperature than the temperature of the refrigerant that prior to the failure.

6. (Previously Amended) The method of operating a superconducting cable according to claim 1, characterized in that a refrigerator capable of cooling substantially down to the freezing point of the refrigerant is used to change the refrigerant temperature between the boiling point and the freezing point of that refrigerant.

7. (Previously Amended) The method of operating a superconducting cable according to claim 1, characterized in that a high freezing point refrigerant is replaced with a low freezing point refrigerant and a refrigerator is used capable of cooling substantially down to or below the freezing point of the high freezing point refrigerant and the low freezing point refrigerant's temperature is changed between the boiling point and the freezing point of this refrigerant.

8. (Original) The method of operating a superconducting cable according to claim 1, characterized in that the refrigerant is one of liquid nitrogen, liquid air, liquid hydrogen, liquid neon, liquid helium, and liquid oxygen.

9. (Cancelled).

10. (Currently Amended) A superconducting cable system characterized by:
a plurality of superconducting cables;
cooling mechanisms that cools a refrigerant for use with the respective superconducting cables; each of said cooling mechanisms being operatively coupled to each of said plurality of superconducting cables;
circulating mechanisms that circulate the refrigerant cooled by the cooling mechanisms to the superconducting cables; and

refrigerant route switching mechanisms which, when one of the superconducting cables becomes unavailable, ~~block supply of the refrigerant to the unavailable superconducting cable and~~ allows a cooling mechanism of a failed superconducting cable to supply of the refrigerant to a remaining good superconducting cables.